

Normal Aging in the General and Intellectual Disabilities Populations

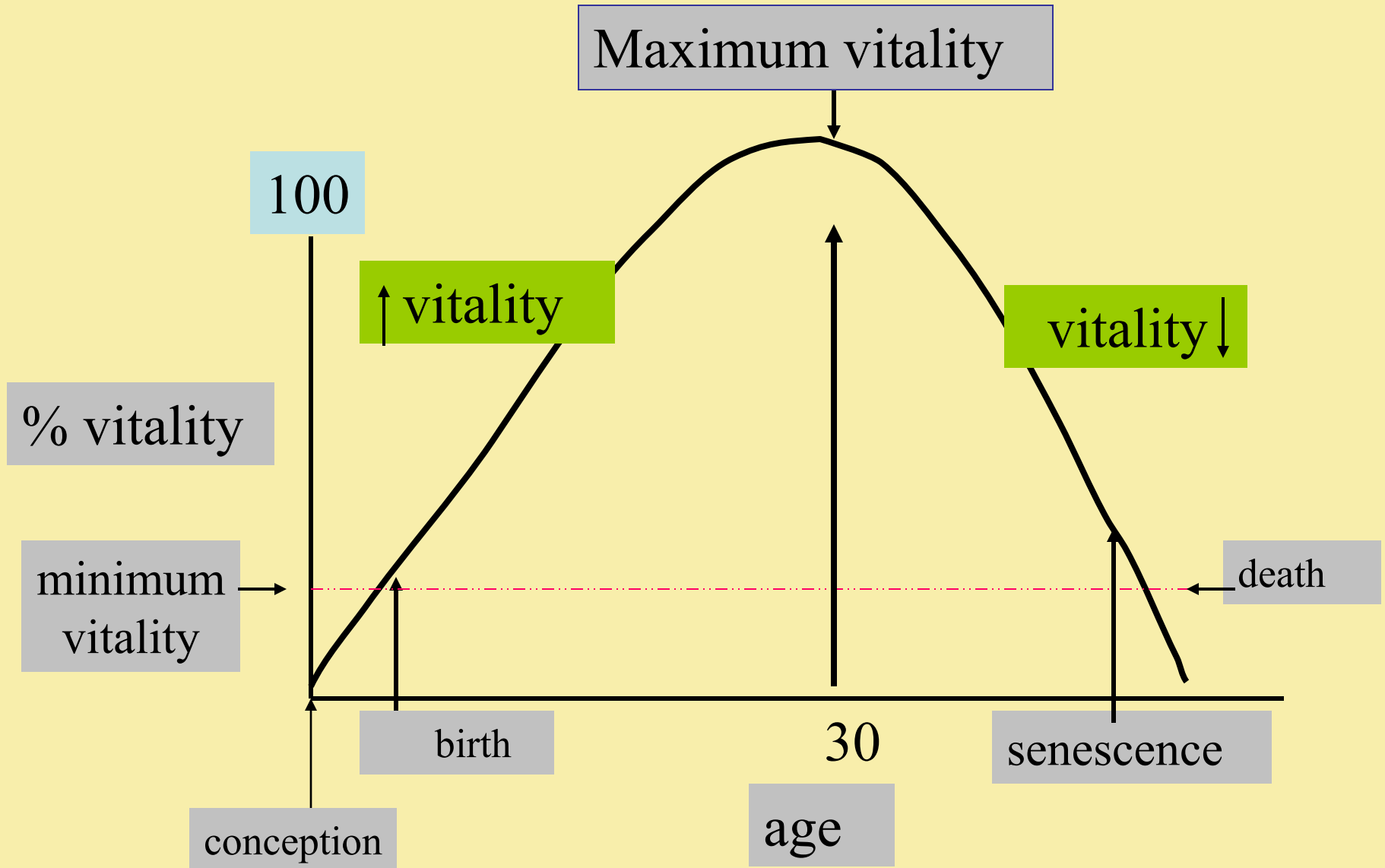
Presenter

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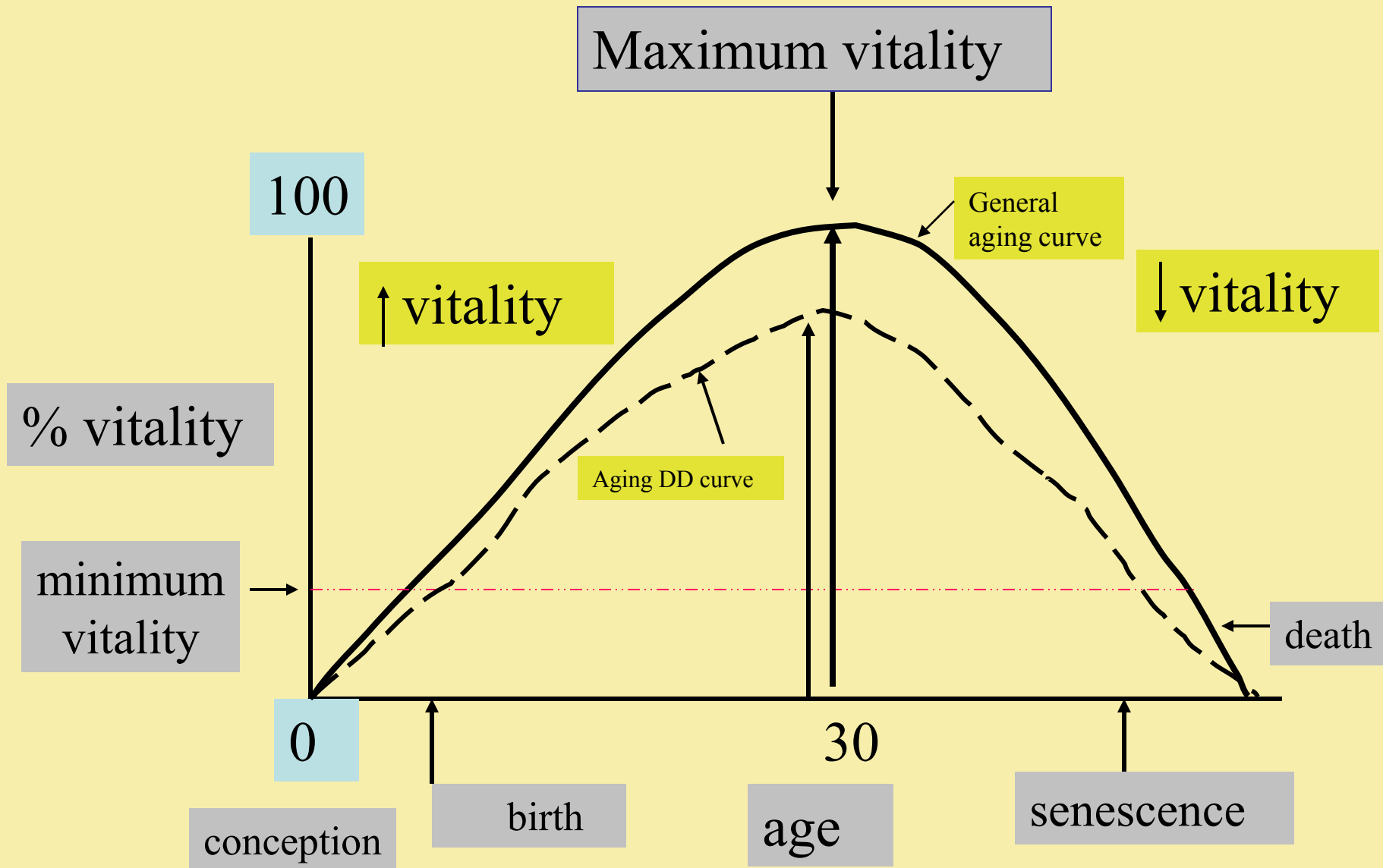
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Review Aspects of Aging

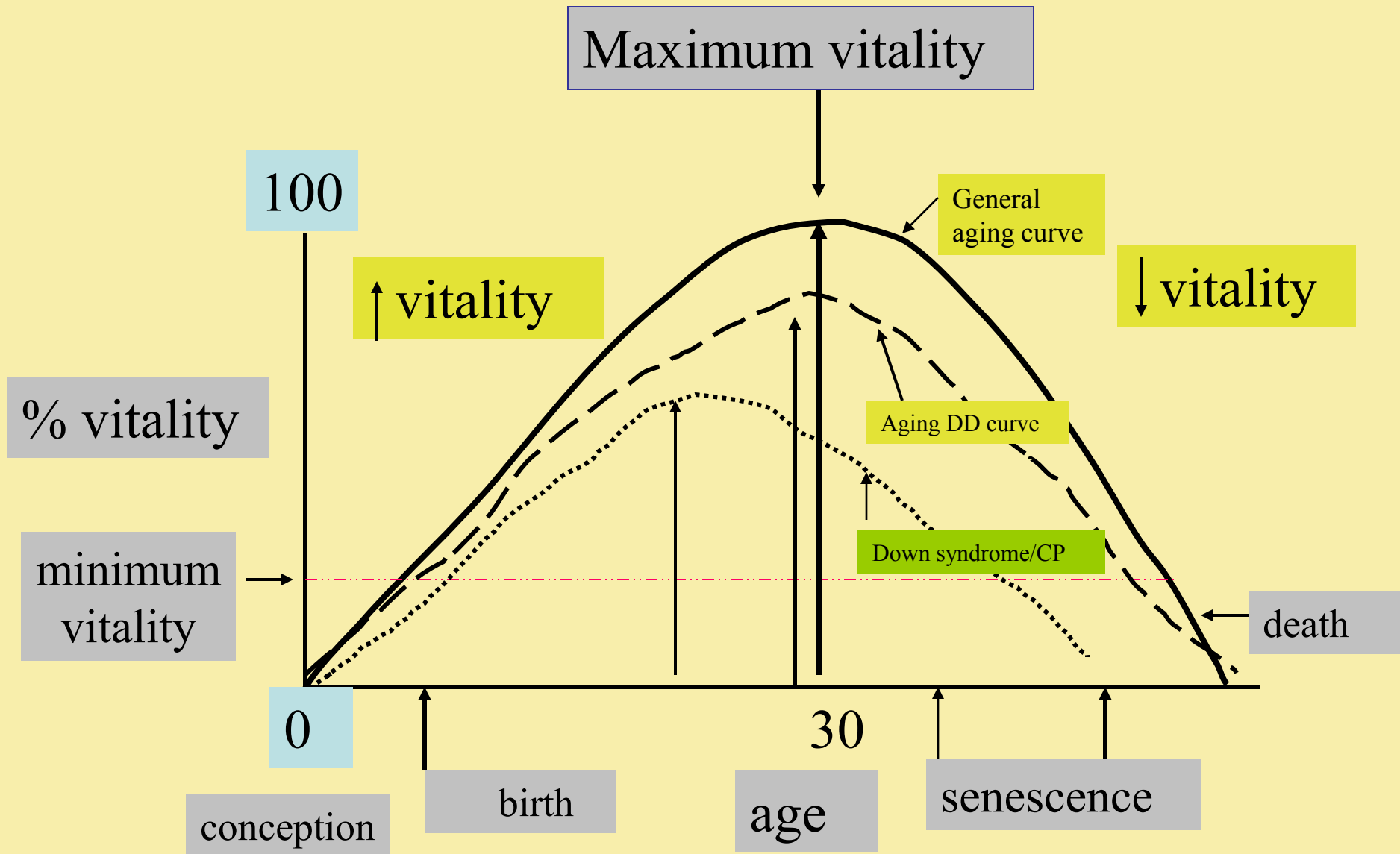
Aging Curve: General Population



Aging IDD Curve



Adult Aging DS/CP Curve



The interaction of the determinants of aging are the same for the adult Down syndrome and Cerebral palsy populations:

- successful aging changes
- rate of change

But longevity is shorter and they experience aging changes earlier having a greater impact on cognitive and/or physical function

Staff must recognize the early aging signs in the adults with Down syndrome and Cerebral palsy that may affect cognitive and physical function and/or mimic or mask disorders and/or diseases

Overview of the biological aging changes that may slowly interfere with the adult ID/D cognitive and or physical function. If staff are not aware of these changes, they can lead to behavior problems increasing the adult with ID/D and staff' s frustrations

Review of Terms to Describe Aging Changes

Age related changes

(successful aging)

Age associated changes

(usual aging)

Diseases associated with aging

(pathological aging)

Biological Systems:

Age related changes

(general and adult IDD population)

Nervous System

- Little to no change
 - IQ remains the same or increases
 - no change in personality
 - little change in ability to learn new skills
 - no major loss of short term memory
 - no loss of long term memory
 - slowing of recall

Changes in the Senses

Age Related Changes in Vision *

- Reduced ability to tolerate glare
- Reduced dark adaptation
- Reduced depth perception
- Need more light
- Reduced ability to distinguish shades of green -blue
- Presbyopia- farsighted

* Early changes in adult with Down syndrome

Age Related Changes in Hearing *

- Increased sound threshold
- Presbycusis - decreased ability to hear high frequencies (children and female voices)
- Buzzing - interferes with hearing, possible auditory hallucinations
- Reduced ability to maintain balance

* Early changes in adult with Down syndrome

Related Effects

- Slowing of recall
- Interference with short term memory
- Slowing of cognitive function
- Reduced ability to process multi- sensory input

Age Related Change in Temperature Regulation

- Increase threshold to feel external temp.

Effects

- May feel cold at room temperature
- May not feel hot - possible heat stroke

Possible Associated Effects

- Possible dehydration
- Possible acute dementia

Age Related Changes in Thirst

- Increased thirst threshold
- Reduced fluid intake

Possible Associated Effects

- Reduced fluid intake
- Increased possible dehydration
- Increased acute dementia

Age Related Changes in Taste/Smell

- Reduced smell
- Reduced taste

Possible Related Effects

- Reduced appetite

Possible Associated Effects

- Acute dementia

Age Related Change in Pain

- Increased threshold
- Reduced pain (may not feel symptoms of diseases)

Possible Associated Effects

- Mimics or masks diseases
- May affect behavior

Sensory Deprivation - Age Associated Changes Resulting in Significant Loss of Senses

Possible effects * (increase loss in the adult DS and CP individual complicated by communication problems by them describing their condition)

- Slow in response to environment
- Possible increase in falls
- Behavior or personality changes

- Reduced socialization
- Acute dementia * especially in adult
with Down syndrome
- Depression
- Inappropriate social response *
(apathy in adults Down syndrome)

Age Related Changes in Skin

Changes

- Reduced oil glands
- Reduced sweat glands
- Reduced fat under skin *

thin skin in adults with DS

Possible Associated Effects

- dry skin, itching, increased water loss, skin infections
- Hyperthermia - coma, dehydration, hyperactivity
- Hypothermia - tired, sleepy, confused, acute dementia
- Bed sores

Changes

- Reduced skin pigment
- Skin becomes thinner

Possible Associated Effects

- Increased chance of sunburn
- Increased splitting and infection

Muscular

Related Aging Change

- Moderate (15%) loss of muscle mass *

* Increase loss in adults with CP

Associated Aging Change

- Severe (33%) loss of muscle

Intervention

- Moderate exercise will strengthen upper and lower body

No intervention

- Significant loss of muscles
- Weak upper body
- Increased falls
- Reduced activities

Bone Loss

Age related changes

- Some loss in jaw bone
- Moderate loss in other bones

Age associated/disease

- Osteoporosis *
- Kyphosis
- * **Increase loss in adults with CP**

Effects

- Dentures may not fit
- Little effect on bones

Effects

- Increased fractures/breaks
- Low back pain
- Reduced height
- Bent over - possible fainting

Joints - RELATED CHANGES *

* Increase problems in adults with CP

- Stiffness in joints
- Stiffness in spine
- Reduced range of motion

Joints - associated changes/disease *

* Increase problems in adults with CP and in the general DD population

- Osteoarthritis
- Rheumatoid arthritis

Cardiovascular

- Little change - blood pressure remains in normal range
- Some arteriosclerosis (smoking and alcohol increases arteriosclerosis) - higher in males *
- * Adults with DS may be more at risk
- Atherosclerosis - poor diet *
- * Adults with DS may be more at risk
- Slowing of blood pressure reflex - longer to regain blood pressure when suddenly standing

Risk Factors for Cardiovascular Diseases (stroke/heart attack)

- Family history
- high blood pressure (low prevalence in DS)
- high cholesterol (low prevalence in DS)
- diabetes 2 (high prevalence in DS)
- Obesity (high prevalence in DS)

Age Related Changes in the Digestive System

MOUTH

- Poor fitting dentures - shrinkage of jaw due to bone loss
- Dryness in mouth - reduced secretions of saliva
- Recessed gums - loss of gum tissue

ESOPHAGUS

- Weakened muscles - difficulty in swallowing food
*(adults with CP at risk for choking) -
- Reflux- increased acid from stomach results in heartburn
- Curling - food slow in reaching stomach - may lodge in esophagus and feel stuck or reverse movement into throat and be inhaled resulting in possible choking

INTESTINES - * Increase risk in adults with DS

- Mild constipation - bowel movement within three days
- Weakening of anal muscles - possible staining of undergarments

Age Related Changes in Nutrition

* Increase risk in adults with DS and CP

- Reduced ability to absorb:
 - iron
 - Vitamin B12
 - calcium - reduced Vit D production
- Slowing movement of intestine - moderate constipation
- Reduced energy needs
- Increased water need
- Increased protein in diet
- Reduced carbohydrates (simple sugars)
- Reduce fat intake
- Increased fiber in diet

Age Associated Effects of Poor Nutrition

- Anemic- may cause acute dementia
- Acute constipation - no bowel movement more than three days
- Increased weight (obesity) -
- Acute dementia
- Increase risk for Osteoporosis
- Dehydration- acute dementia, increase ADR to medications
- Increase risk for CVD

Obesity

Epidemiology - In a study of ID and general populations:

- 70.58% of males and 95.83% of females adults with Down syndrome were obese
- 49.29% males and 62.96% females from other adults IDD subjects were obese
- only 40% of males and 32% females from general population were obese.

Health problems associated with obesity

- increased blood pressure,
- possible increase risk for diabetes two,
- increase risk for heart problems,
- possible increase risk for Alzheimer's disease

De-hydration (communication problems in ID population)

- 31% of the LTC residents dehydrated.
- 48% of older adults admitted to emergency departments had laboratory values indicative of dehydration
- increase falls, constipation, higher rates of fatal coronary heart disease
- over 80 old are border line dehydrated about 55% vs 90% at birth

Age Related Changes in Sleep (possible problem in adults with DS)

- Need 6-8 hours - similar to when younger
- Less time in deep sleep -easier to arouse (feel sleep inadequate)
- Less dream sleep - need nap(s) during day

Causes of Disturbed Sleep Patterns

- Noise
- Worry or anxiety
- Pain
- Medication(s)
- Dementia
- Fear of incontinence
- Uncomfortable bed
- Change - address, room, location of bed or room mate

Hormones

Age Related Changes

- Decreased thyroid function *
- * Adults with DS have increase risk to hypothyroidism
- Menopause - (decreased estrogen) *
- * Adult DS females may not express changes or feelings

Associated Affects

- Low body temperature
- Acute dementia
- Possible mood swings
- Depression
- Bone loss
- Possible short-term memory impairment

Excretory

Age related changes - increased frequency

- Reduced bladder size
- Reduced strength of contraction
- Reduced muscle tone

Age associated change

- Increased frequency of infection
- Decreased control
- Incontinence

Causes of Incontinence

- Depression
- Acute dementia
- Chronic dementia
- Medication(s)
- Disease/dysfunction
- Attention

Age-Associated Diseases in the Female Reproductive System

- Breast/uterine cancer
- Yeast infection
- Severe menopausal symptoms

Possible Age Associated Diseases Indirectly Related to Menopause

- Osteoporosis (high prevalence in adult CP female)
- Increased occurrence of heart disease
- Increased blood cholesterol levels

Reproductive System

Age-Related Changes in the Male

- Enlarged non-cancerous prostate (**lack of communication in adults with DS about inability to urinate**) (BHP - Benign Hyperplasic Prostate)
 - reduced flow of urine
 - reduced ability to urinate
 - reduced force of urine flow

Age Associated Diseases in the Male Reproductive System

* Possible risk in adults with DS

- prostate cancer
 - reduced flow of urine
 - reduced ability to urinate
 - reduced force of urine flow

ASSESSMENT

Level of Assessment

Level 1

- Staff observations and reporting



Level 2

- Neurological Assessment



Level 3

- Medical Assessment

Diagnosis

Causes of Changes

Possible Causes for Changes or Decline
Affecting Functioning Levels

Summary of Possible Causes of Functional Decline

- Side effects of Medication
- Stroke
- Thyroid (hypo-hyper)
- Depression
- Cardiac (hyper-hypo tension)
- Diabetes
- Arthritis (rheumatoid/Osteo)
- Incontinence
- Anorexia
- Sensory Loss
 - Vision
 - Hearing
- Pain
- Environmental Design
- Dehydration
- Fatigue (Infections/Fever)
- Nutritional Deficiency
 - Vitamin B12
 - Iron

1. POSSIBLE CAUSES OF DEMENTIA like SYMPTOMS

- medications
- dehydration(hot days)
- hypothyroidism
- poor nutrition
- low blood pressure

- sensory loss
- personal loss
- change of environment
- sleep reduced or interrupted
- depression/anxiety
- infections

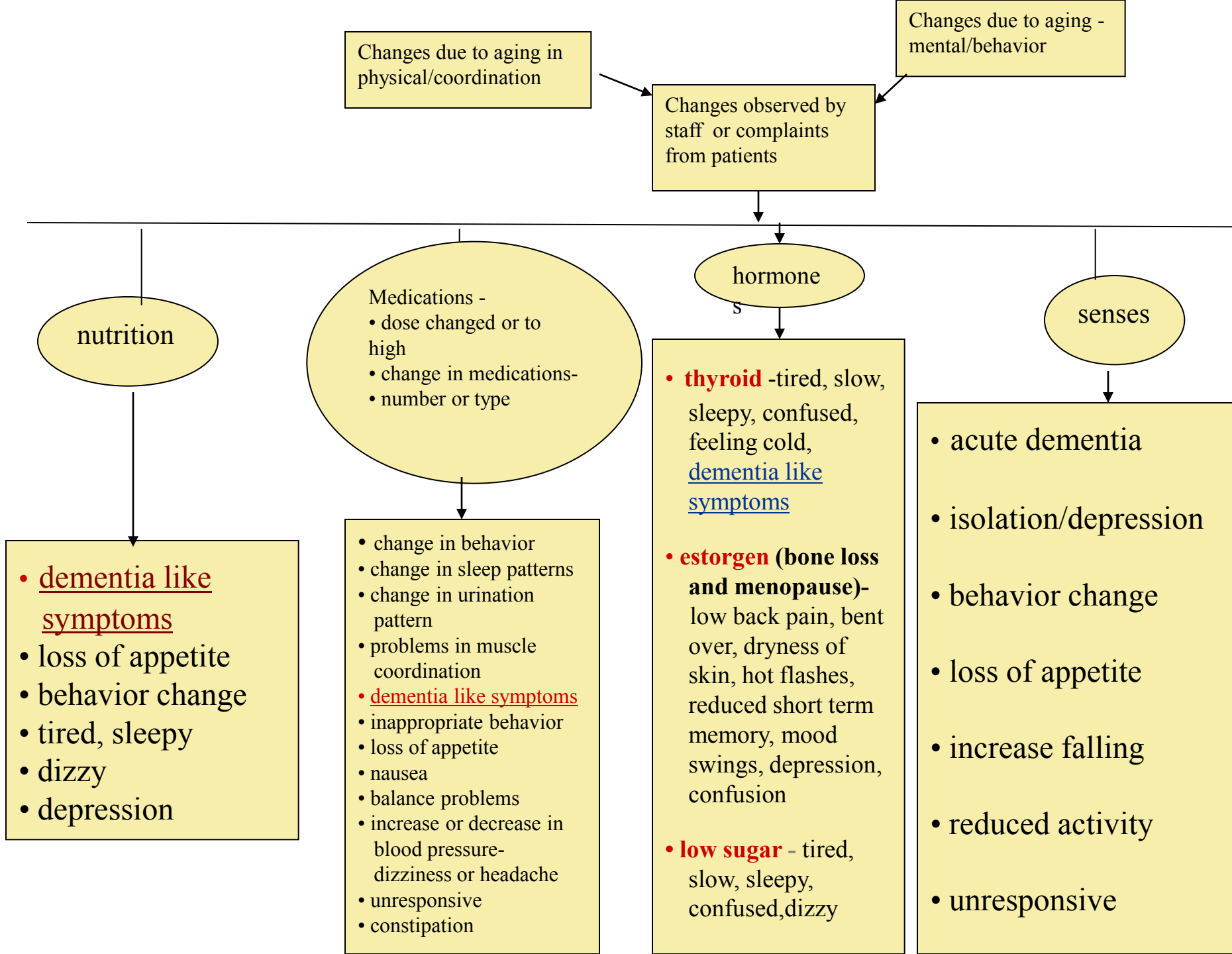
2. POSSIBLE CAUSES OF BEHAVIOR CHANGES

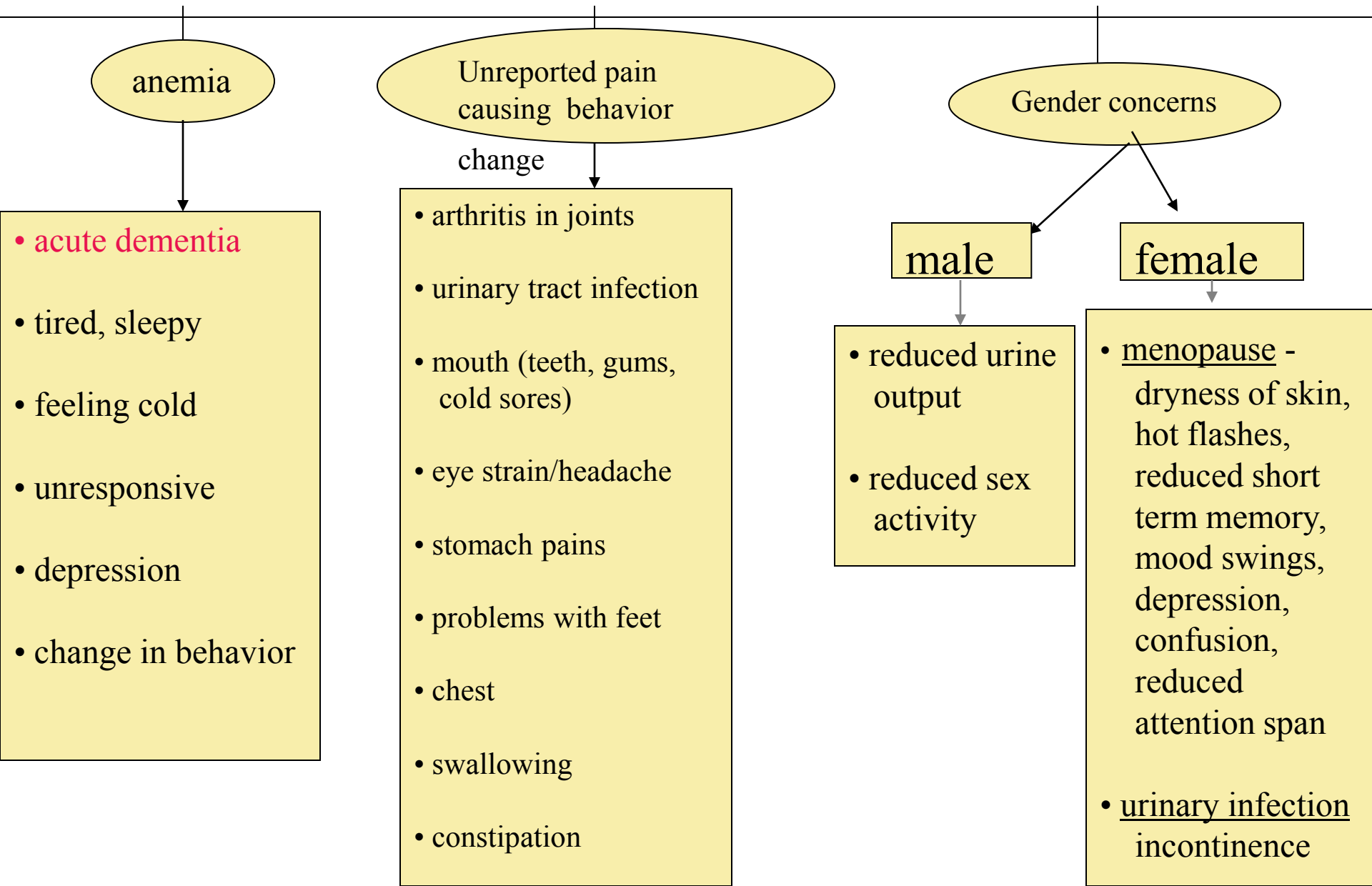
- medications
- sensory loss/environment
- early dementia or progression
- changes in environment
- attention seeking

- dehydration
- personal loss
- problems with urination
- unreported pain/discomfort
- sleep reduced or interrupted
- menopause

Differential Diagnosis Checklist

Combining Changes Affecting Functional Level with Their Possible Causes





anemia

- acute dementia
- tired, sleepy
- feeling cold
- unresponsive
- depression
- change in behavior

Unreported pain causing behavior change

- arthritis in joints
- urinary tract infection
- mouth (teeth, gums, cold sores)
- eye strain/headache
- stomach pains
- problems with feet
- chest
- swallowing
- constipation

Gender concerns

male

- reduced urine output
- reduced sex activity

female

- menopause - dryness of skin, hot flashes, reduced short term memory, mood swings, depression, confusion, reduced attention span
- urinary infection incontinence